

REMARKS

Claims 1 – 17 were previously pending in this application. Claims 1 and 9 are amended. No claims are canceled, and no new claims have been added. As a result, claims 1 – 17 are pending for examination with claims 1 and 9 being independent claims. No new matter has been added. Support for the amendments is found, for example, at paragraphs 24, 25, 28, 60, and 61; and Figures 6A and 6B.

Rejections Under 35 U.S.C. §103

The Office Action rejected claims 1 – 5 and 9 – 14 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,441,558 (“Muthu ‘558”) in view of U.S. Patent No. 5,384,519 (“Gotoh”). Applicants respectfully disagree with this rejection for at least the reasons described below.

Claim 1 recites in part “wherein the one or more first colour light-emitting elements and the one or more second colour light-emitting elements are arranged in relationship with the one or more white light-emitting elements to provide the second white light having the desired correlated colour temperature when the light generated by the light module, including the first white light having the particular colour correlated temperature is extracted and mixed.”

Applicant respectfully asserts that Muthu ‘558 does not teach or suggest this claim element. In Muthu ‘558, identifier 22 is a green LED light source, identifier 24 is a red LED light source, and identifier 28 is a blue LED light source, all of which are included in the light mixer 26. (Column 2, lines 61 – 63 and Figure 1.) None of green LED source 22, red LED source 24, and blue LED source 28 describe “one or more white light-emitting elements” as recited in claim 1. As Muthu ‘558 states, “white light is produced in accordance with one embodiment of the present invention, when the light outputs from Red, Green, and Blue LED light source arrays are mixed in proper combination.” (Column 4, lines 16 – 19.)

Indeed, the Examiner acknowledges that Muthu ‘558 does “not clearly disclose that, the combination color light sources (Red, green, blue, or yellow) includes a white light source... to generate the first white light independent of the... first colour light-emitting elements and... the one or more second light-emitting elements.” (Office Action, pages 3 – 4.) Because Muthu ‘558 teaches white light produced by mixing colored light sources, and does not teach or suggest any white light-emitting elements, Muthu ‘558 does not teach or suggest “the one or more first colour light-emitting elements and the one or more second colour light-emitting elements are arranged

in relationship with the one or more white light-emitting elements to provide the second white light having the desired correlated colour temperature when the light generated by the light module, including the first white light having the particular colour correlated temperature is extracted and mixed” as recited in claim 1.

Gotoh does not cure the infirmities of Muthu ‘558. Gotoh teaches mixing colored light from red, green, and blue light sources with a fourth light source that is a “a light source of white (W) series.” (Column 4, lines 53 – 64.) Further, Gotoh teaches that a “variable color lighting arrangement includes at least first to third light sources and at least another light source, and allows a desired mixed color light to be obtained.” (Abstract.)

Gotoh does not teach or suggest that the desired mixed color light obtained in Gotoh is related to the physical arrangement of its light sources with respect to each other. Instead, Gotoh describes obtaining mixed color light based on a series of calculated mixing ratios. As Gotoh states, “[i]n the present embodiment, an emission color of any one of the first to third light sources of red (R), green (G) and blue (B) series is mixed with another emission color of another light source to imaginarily set a temporary light source, a mixing ratio is calculated with remaining two light sources among the light sources of red (R), green (G) and blue (B) series and with the temporary light source, and a further mixing ratio with respect to the respective light sources required for a desired mixed color light is obtained from a result of the calculation.” (Column 4, line 65 to column 5, lines 7.) Accordingly, Gotoh does not teach or suggest arranging its light sources in any relationship with each other let alone “one or more first colour light-emitting elements and the one or more second colour light-emitting elements are arranged in relationship with the one or more white light-emitting elements to provide the second white light” as recited in claim 1.

Independent claim 9 recites in part “arranging the one or more first colour light-emitting elements and the one or more second colour light-emitting elements in relationship with the one or more white light-emitting elements to generate the mixed white light having the desired correlated colour temperature when the first coloured light, the second coloured light, and the first white light are mixed.”

As is apparent from the above, neither Muthu ‘558 nor Gotoh alone or in proper combination teach or suggest “arranging the one or more first colour light-emitting elements and the one or more second colour light-emitting elements in relationship with the one or more white light-emitting elements to generate the mixed white light having the desired correlated colour

temperature” as recited in claim 9. Each of claims 1 and 9 is allowable for at least the above reasons, respectively. Claims 2 – 5 and 10 – 14 each depend from one of the allowable independent claims and are therefore patentable for at least the same reasons as the independent claim from which they depend, respectively. Accordingly, reconsideration and withdrawal of the rejection of claims 1 – 5 and 9 – 14 under 35 U.S.C. §103(a) is respectfully requested.

The Office Action rejected claims 6 and 15 under 35 U.S.C. §103(a) as being unpatentable over Muthu ‘558 in view of Gotoh, and further in view of U.S. Patent No. 6,507,159 (“Muthu ‘159”). Applicants respectfully disagree with this rejection.

Muthu ‘159 does not cure the infirmities of Muthu ‘558 and Gotoh. The white LED luminary system of Muthu ‘159 is color (RGB) based. (Column 2, lines 65 – 66.) As stated in Muthu ‘159, “[t]he white LED luminary comprises of Red, Green, and Blue (RGB) LED light sources.” (Column 3, lines 4 – 5.) The RGB luminary control of Muthu ‘159 controls light from colored light sources.

Muthu ‘159 describes white light produced by mixing colored light sources, but does not teach or suggest the use of any white light-emitting elements. Accordingly, Muthu ‘159 does not cure the deficiencies of Muthu ‘558 and Gotoh described above regarding independent claims 1 and 9.

Claim 6 depends from allowable independent claim 1, and claim 15 depends from allowable independent claim 9. Accordingly, each of claims 6 and 15 are patentable for at least the same reasons as the independent claim from which they depend, respectively, and reconsideration and withdrawal of the rejection of claims 6 and 15 under 35 U.S.C. §103(a) is respectfully requested.

The Office Action rejected claims 7 – 8 and 16 – 17 under 35 U.S.C. §103(a) as being unpatentable over Muthu ‘558 in view of Gotoh, and further in view of U.S. Patent No. 6,488,390 (“Lebens”). Applicants respectfully disagree with this rejection.

Claim 7 – 8 depend from independent claim 1 and claims 16 – 17 depend from independent claim 9. The deficiencies of Muthu ‘558 and Gotoh concerning claims 1 and 9 are described above.

Lebens does not cure the infirmities of Muthu '558 and Gotoh. Lebens discloses a color adjusted flashlight having LEDs made from a material such as indium gallium nitride. (Abstract and column 6, lines 45 – 49.) The LEDs of Lebens are either white LEDs that yield a white appearing light output (column 9, line 49 – 52) or standard colored LEDs of red, yellow, green, and/or blue, with each colored LED controlled separately to provide combined white light from the colored LED sources (column 9, lines 55 – 60). Thus, Lebens provides white light by either a white LED that yields white appearing light, or by separately controlling colored LED sources to provide white light. The white light produced in Lebens is not further mixed with any other light sources to provide a second white light.

Because Lebens does not provide a second white light, Lebens either alone or in proper combination with Muthu '558 and Gotoh also does not teach or suggest “wherein the one or more first colour light-emitting elements and the one or more second colour light-emitting elements are arranged in relationship with the one or more white light-emitting elements to provide the second white light having the desired correlated colour temperature when the light generated by the light module, including the first white light having the particular colour correlated temperature is extracted and mixed” as recited in claim 1. Further, Lebens either alone or in proper combination with Muthu '558 and Gotoh also does not teach or suggest “arranging the one or more first colour light-emitting elements and the one or more second colour light-emitting elements in relationship with the one or more white light-emitting elements to generate the mixed white light having the desired correlated colour temperature when the first coloured light, the second coloured light, and the first white light is mixed” as recited in claim 9.

Accordingly, each of claims 7, 8, 16, and 17 are patentable for at least the same reasons as the independent claim from which they depend, respectively, and reconsideration and withdrawal of the rejection of claims 7, 8, 16, and 17 under 35 U.S.C. §103(a) is respectfully requested.

General Comments on Dependent Claims

Since each of the rejected dependent claims depends from a base claim that is believed to be in condition for allowance, Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicants do not necessarily concur with the interpretation of the rejected dependent claims as set forth in the Office Action, nor do Applicants concur that the basis for the rejection of any of the dependent

claims is proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

CONCLUSION

It is respectfully believed that all of the rejections, objections, or comments set forth in the Office Action have been addressed. However, the absence of a reply to a specific rejection, objection, or comment set forth in the Office Action does not signify agreement with or concession of that rejection, objection, or comment. In addition, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Furthermore, nothing in this paper should be construed as intent to concede any issue with regard to any claim.

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney, Mark L. Beloborodov, Esq. at (781) 418-9363 to discuss any outstanding issues relating to the allowability of the application.

Respectfully submitted,
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